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STATE OF IOWA
1955

**PUBLIC SCHOOL
FACILITIES SURVEY
IN IOWA**

Final Report

By the

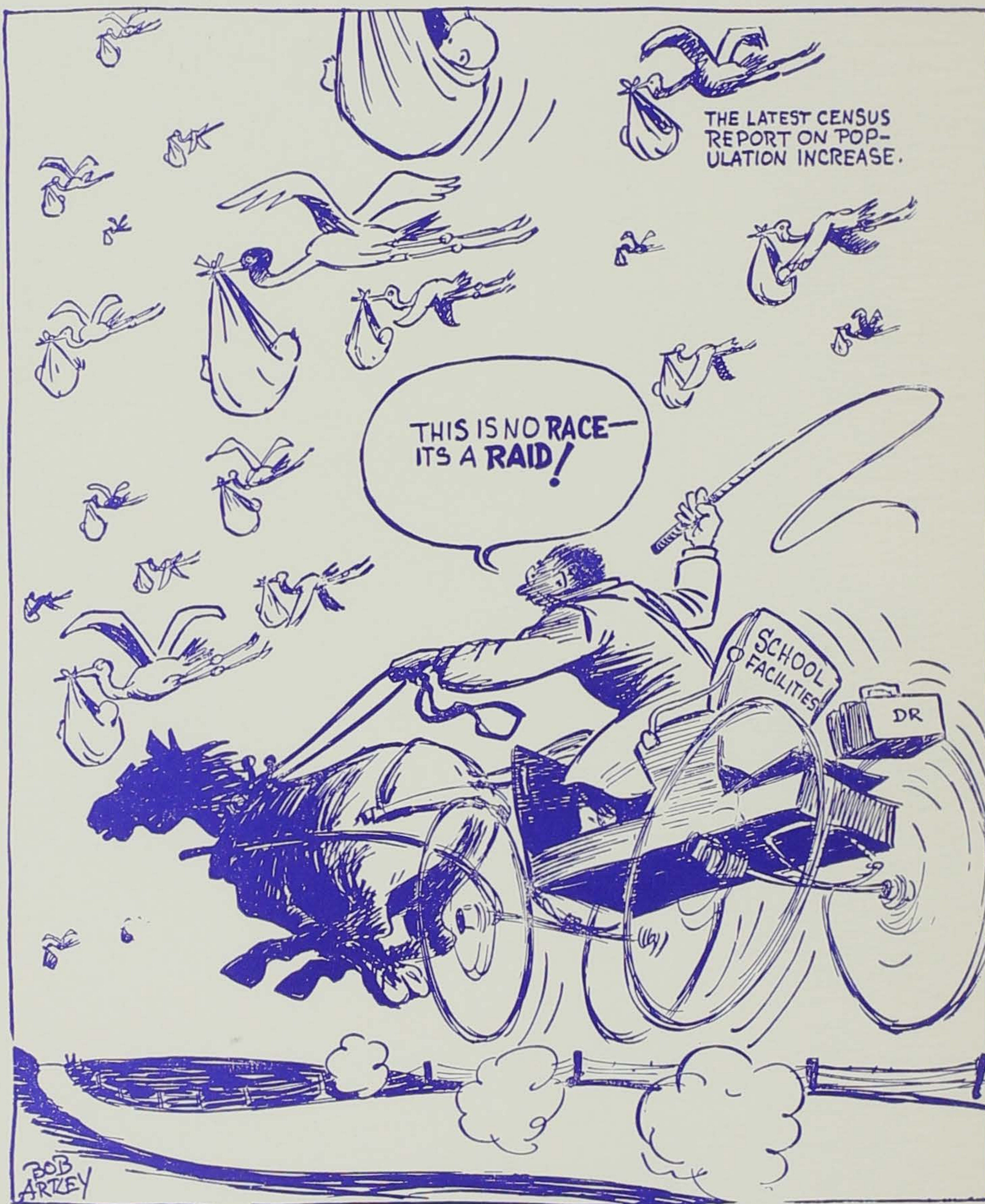
**DEPARTMENT OF
PUBLIC INSTRUCTION**

May 1, 1955

Published by the State of Iowa



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A Race With the Stork

—Cut courtesy Des Moines Tribune

State of Iowa

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THE STATE OF IOWA
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DEPARTMENT OF PUBLIC INSTRUCTION

IOWA PUBLIC SCHOOL FACILITIES SURVEY
SECOND PHASE AND FINAL REPORT
AN ANALYSIS OF PUBLIC SCHOOL BUILDING NEEDS FOR IOWA

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This Report Prepared by A. B. Grimes
May 1, 1955

FOREWORD

On October 1, 1952 the Department of Public Instruction published a summary of the First Phase of the Public Schools Facilities Survey as authorized by the 81st Congress.

The First Phase summarized and evaluated: (1) existing school facilities, (2) current school plant needs, and (3) financial resources currently available to meet those needs for the school year 1952-53.

This Second or Final Phase of the Survey gives information on construction completed from September 1952 to June 30, 1954, relates certain changes in the status of school enrollments and school district boundary lines, and analyzes public school building needs for Iowa to the beginning of the 1959-60 school year.

A master plan for school plant construction will be developed as it relates itself to the organization of satisfactory administrative units and logical attendance areas and centers. The construction of school buildings is so closely related to educational curricula and needs, the trends of population, the types of school organizations, and the ability of districts to finance additional facilities, that any one of these areas cannot be developed without full consideration of the others. It is with these factors that the Second, or Final Phase of the Survey as herewith presented, concerns itself.

J. C. WRIGHT,
SUPERINTENDENT OF PUBLIC INSTRUCTION.

May 1, 1955

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CHAPTER 1

History of the Survey in Iowa

Why a Survey?

Much has been written in the past few years about the increasing rise in population and how it is affecting enrollments in school districts all over the nation. School facilities in a large number of districts have been supersaturated with children and many of these children are being housed in church basements, lodge halls, old business structures, unsafe and unsanitary school quarters, just about anywhere in order to keep them in school. Many are sent to school in shifts and spend but two to three hours each day in classrooms. Far too many are not going to school at all. The shortage of classrooms is no longer considered a problem but a way of life.

It is estimated that every 15 minutes 30 more children reach school age. These so-called "war babies" are now crowding the lower grades and will gradually move into the junior high schools and then into the senior high schools. Eventually they will move into the colleges and universities.

The education of younger America is not only affected by the lack or inadequacy of classrooms and other school facilities but many states report that the shortage of elementary teachers is getting worse. This personnel shortage, coupled with inflationary costs, plus the lack of financial means to build, equip, and operate schools, is rapidly proving to be one of America's major problems, and it is a problem that must be faced immediately.

Attention to and action on the educational needs of the youth of our nation is long overdue. No state is exempt.

In 1950 President Truman in his budget message stressed the importance of a Federal survey of educational needs and the adequacy of state and local resources available to meet those needs.

In September, 1950 the 81st Congress passed Public Law 815 which under Title I stated as its purpose: "... to assist the several states to inventory existing school facilities, to survey the need for the construction of additional facilities in relation to the distribution of school population, to develop State plans for school construction programs, and to study the adequacy of State and local resources available to meet school facilities requirements . . ."

Congress appropriated \$3,000,000 to states and territories, on a matching basis, to assist them in making their respective surveys. All of them were eligible to make a survey and many of them have already completed both phases of the Survey. The Iowa legislature approved the Survey project and appropriated \$47,600 as its half-share to defray the expenses of making the Survey, to be completed within a three-year period.

Iowa completed the First Phase and it was published in October 1952. Since that date interest has been centered on the Second or Final phase and with the publication of this report the Survey in Iowa as set up by the 81st Congress will be completed insofar as the Federal Government is concerned.

First Phase of the Survey

The First Phase of the Survey is known as the status phase which summarized and evaluated three things: (1) existing school facilities, (2) current school plant needs, and (3) financial resources currently available to meet those needs.

Every school district in Iowa was contacted including rural, independent, and consolidated. This included 6,286 school plants housing 481,060 pupils, and 6,471 school buildings in which classes were held all day or part of a day for 501,059 pupils. (A pupil may attend classes during a day in two or more buildings and would be counted in each class, hence the differentiation in the number of pupils enumerated above.) (A school plant may be made up of only one building as is the case of most rural schools, or it may be composed of two or more buildings as is found in many town and consolidated school districts.)

A summary of the First Phase of the Survey indicated these facts as of June 30, 1951:

- In 1950-51 there were 835 public school districts in Iowa maintaining high schools. There were 281 school districts that had a high school average daily attendance of less than 50 pupils, and 591 districts with less than 100 pupils in average daily attendance. The median high school average daily attendance in all high schools was 66.4 pupils, and the average high school average daily attendance was 125.1 pupils.
- 70 percent of the districts maintaining high schools with an average daily attendance of less than 100 pupils, house only 30 percent of the total high school average daily attendance of the state. In other words 30% of the high schools were educating 70% of the pupils. There was one high school with an average daily attendance of less than 10 pupils, and 22 high schools with less than 20 pupils.

Rural Elementary

- In 1935-36 there were 9,018 rural one-room schools open enrolling 130,089 pupils. In 1950-51 there were 4,628 schools open enrolling 68,995 pupils.
- In 1951 there were 3,021 one-room rural schools that were closed, many of them having been idle for several years.
- 94% of all rural school buildings were combustible and had but one classroom. 98% of them were one-

story structures.

- 78% of all rural plants (4,240) housing 65,055 pupils had outside toilets. 71% of the buildings had no fixed washing facilities.
- 12% of all rural schools were on sites of less than one acre, while 98% were on sites of less than three acres.
- Over 75% of Iowa's rural schools were over 50 years old. 73% (61,005) of the rural enrollments attended school in these old buildings.
- 82% of all rural classrooms had less than 20 pupils in enrollment in each room.
- 1,396 rural pupils were going to school in quarters that were sub-standard. Four schools involving 166 pupils were so crowded that the children were attending school in two shifts, half of them in the forenoon and half in the afternoon.

All Schools

- Only 11% of all school buildings were fire resistive, 11% semi-fire resistive and 76% were combustible.
- 78% of all school buildings housing 21% of all pupils were one-story structures. 48% of all secondary buildings housing 48,749 pupils were three stories high.
- 73% of all one-story buildings were combustible.
- Iowa was not up to the national average in its number of shops, laboratories, homemaking rooms, music rooms, art rooms, and business education rooms, but did exceed the national average in number of libraries, cafeterias, gymnasiums and auditorium facilities.
- Less than half the schools had mechanical ventilation.
- Only 1½% of elementary school sites in Iowa measured up to the standard of 5 acres. 84% of all elementary buildings were on sites of from 1 to 2.9 acres. 58% of secondary schools were on sites of less than 3 acres.
- 47% of all pupils, or 327,361, went to schools on sites of less than 3 acres.
- 62% of all school buildings were over 50 years old as compared with 16% national figures.
- In Iowa 63% of all pupils went to school in buildings over 31 years in age, compared to 27% national figures.
- The majority of Iowa's children were attending classes in old buildings on small sites.
- Most Iowa high schools were in buildings housing also the elementary grades. Out of 771 such buildings, 442 of them were composed of 7 to 13 classrooms.
- There were few large school plants in Iowa. 23% of Iowa's children were housed in school buildings having 21 or more classrooms. The national average was 32%.
- 23% of all national school plants were rated as satisfactory but in Iowa only 17% were so rated. In reversing the picture it was found that 35% of the nation's pupils were housed in satisfactory plants while in Iowa 53% of the children were housed in satisfactory plants.
- About 60% of the classrooms in Iowa contained less than 700 sq. ft. It is recommended that there be at least 1,000 sq. ft. in regular classrooms.
- Some children were going to school in store buildings, in church basements, in barracks, in corridors, on stages, in homes, and in many other similar areas not designed for school use.
- 404 school buses over 10 years old were being used to help transport children to school.
- 134,967 pupils or 28% of all pupils attending public schools were transported in 1950-51 in 3,502 school buses. 84% of the buses were school-owned.
- 669 new school buses were needed by the fall of 1952, at an approximate cost of \$2,733,613.
- 2,942 new classrooms were needed by September 1952, to relieve over-crowding, to replace obsolete buildings, and to house enrollment increases.
- Approximately 1,300 more acres of land were needed by September 1952 for new sites and to enlarge and improve present sites.
- The total cost of needs for Iowa schools in new construction, new buses, and the improvement of present facilities were as follows:

SUMMARY OF NEEDS BY FALL OF 1952

Needed rehabilitation and remodeling.....	\$ 2,994,075
Needed new construction	
to relieve overcrowding.....	\$31,997,310
to house enrollment increases.....	14,443,640
to replace obsolete buildings.....	45,692,800
Needed additions to existing buildings other than classrooms.....	21,699,344
	113,833,094
Needed new sites and site improvements	3,700,625
Needed new school buses.....	2,733,613
Total.....	\$123,261,407

- The legal debt limit in Iowa prevented many school districts from providing needed school facilities.
- School lunch programs in Iowa schools were at an all-time high with an average of 145,674 pupils served daily in 1951-52 in 1,008 public and 100 parochial and private schools.
- Greater demands on school facilities in Iowa can be expected with the increased birth rate.

Second Phase of the Survey

The Second Phase of the Survey has to do with a "state-wide master plan for a program of school plant construction according to existing and contemplated satisfactory administrative units and according to suitable centers serving logical attendance areas."¹

This so-called master plan is premised on such factors as what administrative units are now existent and what changes might be effected whereby the schools could be managed more efficiently and perhaps more economically. It is concerned with what might be done to reorganize school areas and centers so that the educational program could be improved. It is interested in what is happening to the population and what facilities might be needed to take care of the trends. One of the main factors of concern is the school districts' ability or inability to pay for its educational needs and what might be done through reorganization plans to improve the financing of adequate buildings and programs.

This second part of the Survey was to have been completed by June 1953 but this date was postponed because most states, including Iowa, have realized that if an authentic view of school plant needs by 1960 is to be obtained, then there must be a great deal of study and promotion given to the improvement of school district reorganization.

The federal agency suggested that each state set up its own methods and standards in reaching the objectives of the master plan, or second section of the Survey. The U. S. Office of Education emphasized the importance of such things as satisfactory administrative units, logical attendance areas, and long-term planning of

modern educational programs to be adequately housed, but it did not attempt to dictate to the states the procedure to be followed in reaching the objectives. No doubt each state has problems and conditions peculiar to its own area and therefore will desire to follow a plan of its own. No procedures will be the same nor will the end results of the Survey be too similar.

In order to appreciate the past, present, and future of school plant facilities in Iowa both sections of the Survey, Phase One and Phase Two, should be read simultaneously.

Survey Procedure Used in Iowa

For some time Iowa has been in the process of school district evolution (some call it revolution). There are high school districts, elementary districts, and areas where there are no schools at all or any property tax paid for school support. Because of this status which is slowly being changed, it appears that any long-range program of school building construction must be based on the needs of school districts as they are at the present time, with a description of what is taking place in the state regarding district boundary lines and effects of school district consolidation and reorganization.

Through a questionnaire each school district of Iowa outlined its present status, what facilities had been provided from July 1, 1951 to June 30, 1954, and outlined its needs from July 1, 1954 to September 1959. These questionnaires were returned to the office of the State Department of Public Instruction where they were gone over carefully by certain staff members, corrections and modifications made where it was necessary to balance certain cost items and square footage, and the results compiled as presented in this report.

To appreciate the relationship that exists between the need for facilities and the changing of district boundary lines, one must study the fluctuations that have taken place in Iowa laws regarding school districts over the years. One must be cognizant of the status of a school district under the present Iowa statutes, and be prophetic in his appraisal of the future of school districts according to present trends. This is fully covered in the next chapter on the past, present, and future of Iowa school districts.

¹ *School Facilities Survey Bulletin No. 10*, Title 1, P. L. 815, 81st Congress, January 18, 1952.

CHAPTER 2

The Past, Present and Future of Iowa School Districts

by JOHN G. SHULTZ

I. The Problem of School District Reorganization

The public school district structure in Iowa has long been a concern of a relatively few lay and professional people. The basic structure of a school district is so closely related to the financing of public education that many people contend that organization of sound basic districts must be accompanied by the adoption of an adequate financial pattern. This viewpoint assumes that the first objective is an acceptable program of education for children in terms of quality and breadth, equally available to all children.

More recently the group interested in this viewpoint has grown in number. The factor that has motivated this interest is that people in general have become increasingly aware of a need for evaluating the educational program in our schools in terms of meeting the needs of modern youth.

These people have discovered that programs of education are not the same from district to district and that there is a wide range of difference in breadth and quality of such programs.

A certain crystallization of a long time objective is apparent. Iowa currently has in excess of 4,500 school districts, 822 of which provide facilities for high school. The median high school enrollment, grades nine through twelve, is 75 pupils. The range in per pupil cost is from \$200 to \$1,000. The correlation between high costs per pupil and small enrollments in these high schools is significant.¹

Recent research at Iowa State College would indicate that the quality and breadth of program decreases as enrollment decreases.² The problem therefore needs little amplification when one faces these realities except to point out that in Iowa it goes beyond the elimination of the elementary school district.

The objective therefore can be briefly stated as follows: All the area of this state should be in 12-grade districts in which there are at least 600 pupils of school age enrolled in public schools. Realizing that the 600-pupil standard is but one-half that recommended as a minimum by national authorities, it is nevertheless the greatest number which can at the moment command any support as a long time objective in this state.³

¹ Department of Public Instruction, *Per Pupil Costs*, Unpublished bulletin No. 154 A 485 AF.

² Dr. Wadhawa S. Theophilus, Thesis "Relationships Between Size of School Expenditure and Quality of Education in Elementary Schools"—Iowa State College, Ames, Iowa.

³ Howard A. Dawson, *Your School District*, Published by the Department of Rural Education, N.E.A., 1201 Sixteenth St. N.W., Washington, D. C.

II. The Role of the Legislature in School District Reorganization

The legislative pattern beginning in 1945 with the first reorganization law, has followed two general principles, (1) that new and larger and more efficient districts should be formed around identifiable, cohesive, self-sustaining communities, and (2) that they should be effected through the authority of the people. The second so-called principle under present legislation gives the right of franchise not only to each local district, but also to any portion of a district involved in a proposed new district. It is a highly refined process of local option.

The first legal act specifically incorporating the idea of reorganization was passed in Iowa by the 51st General Assembly in 1945. It designated the county boards of education as reorganization committees in Iowa. It charged these boards with the responsibility of making studies of the currently organized districts of each county and territory adjacent thereto. It further provided for these boards to prepare county plans for new districts larger than the old districts, more economical than the old districts, and which would more nearly provide equal educational opportunities. However, it set no deadline date for these county plans to be completed.

County boards, with the help and guidance of the Department of Public Instruction, initiated studies in 1945 and 1946 in the majority of counties. County plans were not forthcoming for a number of reasons. Local people sensed another era of consolidation similar to the early twenties. By and large the rural agricultural area had not had a pleasant financial experience with the earlier consolidation. The Department of Public Instruction had set certain standards for new districts which were not acceptable to county boards nor to a large extent by the people represented by those boards. The voting procedure prescribed by the law was of such nature that it was almost impossible to carry a proposal for a new district to a favorable vote. There were, however, between 1945 and 1947 a few additions to existing high school districts.

In 1947, the 52nd General Assembly placed a moratorium until June 30, 1953 on the use of any legal procedure in the Iowa school code for effecting a new district except the procedure in the reorganization act itself. Nothing significant was done in the matter of reorganization legislation by the 53rd General Assembly in 1949, with the possible exception that it removed the authority of the Department of Public Instruction

to approve county plans. Consequently, between 1947 and 1951 no district boundary changes were effected.

In 1951, the 54th General Assembly repealed the moratorium and reactivated all the old legal procedures for forming new districts. From 1951 to 1953, about 80 new districts were formed. With two exceptions this was simply a matter of adding to existing high school districts the area, or a portion of the area served by the high school district for at least high school facilities on a contractual basis. One of the exceptions was where two high school districts joined forces in a consolidated district under the provisions of an old consolidation law. These two districts absorbed all the rural area served by each of the two original high school districts. The second exception was a new district which involved two high school districts. It took in very little of the rural area served and consequently was inadequate in terms of tax base.

In 1953, the 55th General Assembly repealed all the old procedures for legally forming new districts and incorporated many features of the several old laws into a new act or a revised reorganization act. Since May 1, 1953, which was the effective date of the new reorganization law, there have been approximately 60 new community districts formed. Again, it appears to have been primarily an attempt on the part of existing high school districts, typically the small ones, to strengthen their financial ability by increasing the tax base and thus insuring their existence for the foreseeable future. The new legislation incorporated a 300-pupil standard which required that a proposal must have at least 300 pupils of school age enrolled in public schools within the boundaries of the proposed district. Even with this limited standard, over 75% of the new districts formed since the new law was enacted enroll less than 600 pupils.

Summarizing the events between 1951 and July 1, 1954, Iowa has reduced the number of school districts by approximately two hundred. As a result of reorganization of districts, there are five fewer high school districts.

Of approximately 150 districts formed during this period, one-fifth have an enrollment of 500 pupils or more, kindergarten through the 12th grade. Over one-half of these districts have at least \$10,000 in assessed valuation per resident child enrolled. Over two-thirds of these districts have an area in excess of 50 square miles.

As of July 1, 1954, 77 of Iowa's 99 counties had prepared and filed with the State Department a county plan for the reorganization of school districts. The vast majority of these plans will not meet acceptable standards as recommended by the State Department and as set forth later in this report.

One of the major criticisms of Iowa's attempts at reorganization is that planning of districts has been inadequate. Those who have been asked to ballot on new proposals have not comprised an informed electorate. The people have expressed themselves at special elections either for or against a proposed new district,

without having much chance to learn the real advantages or more often the real disadvantages of the new district. The only questionable advantage that can be said to have resulted from these mergers is that they have additional financial ability through the acquiring of assessed valuation. They are only better able to afford their inefficiency.¹

III. The Choice of a Planning Area or Unit

The nature of the legislation reviewed almost mandates that in planning new districts in Iowa the county should be the basic planning unit. The county school systems and their county boards of education have become prominent agencies to which the legislature has delegated responsibility and authority for redistricting. Any other planning area would seem to be undesirable. The typical Iowa township would not have enough pupils to function efficiently as an administrative unit.

At least two-thirds of the 822 Iowa high school districts would be too small to be adequate planning areas because of the shortage of enrollment and, in some cases, an inadequate tax base. Over 500 of these high school districts have an average daily attendance of less than 100 pupils.

The 99 counties, then, seem to be the logical choice. This, however, assumes cooperation between counties in that the anticipated new districts for any given county might well include territory in an adjacent county. The present legislation anticipates that adjacent counties plan cooperatively and that there is nothing sacred about the county boundary line. It is recommended that Iowa continue to use the county as a planning area in its redistricting program.

IV. Standards for New School Districts

As early as 1949, the Department of Public Instruction adopted standards for new school administrative units and attendance areas.² These standards were published at that time and later published in the Handbook for the State Department of Public Instruction. The principles outlined by the Department are recommended for use as the basic objectives and standards for future planning and ultimate effecting of sound basic administrative units and attendance centers.

The standards are as follows:

1. For administrative units:
 - a. The entire area of the state (exclusive of state and federally-owned lands) should be contained in a series of administrative units, each sup-

¹ State Department of Public Instruction Bulletin No. 653 A 271 AF (Rev. 653A-287AF) *A Review of School District Reorganization from January 1, 1951 to May 1, 1953*, and No. 654A-649AF, *A Review of School District Reorganization in Iowa, January 1, 1951 to June 1, 1954*, and No. 754A-653AF, *Handbook for State Department of Public Instruction*.

² State Department of Public Instruction, Administration and Finance Bulletin No. 20, *Developing School District Reorganization Plans, A Manual of Procedure for County Boards of Education*.

porting a school program extending through at least twelve grades.

- b. The administrative unit boundaries should be established with due regard for self-sustained community areas, population characteristics, natural barriers, transportation facilities, and financial ability to support a public school program through a combination of local and state support.
 - c. Proposals for administrative units should include plans for maximum utilization of existing plant facilities.
 - d. New administrative units should be organized so as to provide the greatest flexibility in location and organization of attendance areas.
 - e. Administrative units should be so organized as to have sufficient human resources to have one grade per teacher in the elementary attendance areas, and to require a minimum high school teaching staff of ten teachers in high school attendance areas, each with a reasonable pupil-teacher ratio.
 - f. Each administrative unit should establish policies which will require equal qualification for teachers in like positions throughout the district.
 - g. Administrative units should be so established to not only provide qualified instruction in each teaching field but also proper equipment and space. Qualified supervisory personnel should be provided to assist teachers and to integrate activities in various fields of teaching, counseling, and administration under the central control of the administrative unit board.
2. For attendance centers:
- a. The minimum educational program should include:
 - (1) Sound, efficient, and integrated instruction in the basic skills.
 - (2) Instruction in the fields of communication skills, physical science, mathematics, and social science.
 - (3) A health and physical education program for all pupils, which offers periodic medical and dental examinations, does something for the physically handicapped, provides recreation for all (not a few), teaches good health practices for family living and provides adequate nursing services.
 - (4) An integrated guidance program which begins with the child's entrance to school and follows through his entire educational experience.
 - (5) A music and arts program which offers both group and individual instruction and develops understanding and appreciation of all cultural arts and which challenges

individual talents.

- (6) Occupational training in those fields which are needed to give the individual some occupational exploration as well as the necessary college preparatory courses for those individuals who are going to continue their training at a higher level.
 - (7) Education for participation and civic competence in a democratic society.
- b. Additional services should include:
- (1) Plant facilities adequate to the proper educational environment in terms of space, equipment and services.
 - (2) Efficient pupil transportation.
 - (3) Adult education which extends through twelve months of the year.
 - (4) Adequate library services which if need be are extended to the entire community.
 - (5) Social and recreational services for school and community.
 - (6) A school lunch program.

In establishing these standards for the organization of administrative units and attendance areas, it must be kept in mind that they are intended to be minimum standards and whenever and wherever they can be exceeded it should be done. It is recognized that in many cases it will not be possible for every administrative unit to fully meet every item of the standards, especially at first.

In order to encourage and assist the formation of efficient school districts in Iowa the Department of Public Instruction patterned its services around the following objectives:

1. To assist and encourage county boards in their key positions with respect to planning and effecting new districts.
2. To encourage county boards through their studies and surveys to make facts available concerning school districts in their counties as they are presently organized. The scope of these facts includes quality and breadth of school program, and financial ability and efficiency in terms of cost per pupil.
3. To encourage county boards to find key people in all their districts who will take the lead in a public relations or a citizens' education program. Such activities often will take the form of committees made up of citizens interested in the school. It will result in both school patrons and lay people participating in a plan for new districts in cooperation with the county boards.
4. To serve in the capacity of unofficial interpreter of legal procedure for county boards and local districts. Such service must be given with the qualification that the interpretations are subject to correction by the agencies of authority in such matters, for example, the attorney and the courts.

5. To take the lead in a good public information program concerning school redistricting which will reach the boards of education and people interested in their schools.
6. To discover new methods, techniques, and tools for implementing this program.

V. The Role of the Department of Public Instruction in Reorganization of New School Districts

Iowa has had a pattern set for planning-by-counties in at least two of its 99 counties.¹ The procedure used in these studies, as carried out by a survey team from the staff of the State Department of Public Instruction, may serve as a guide to implement a progressive program of planning for new districts in the state.

The Louisa County Survey

The Department of Public Instruction was invited by the county board in Louisa County to study its county and territory adjacent thereto and to evaluate the possibilities of recommending three administrative units therein. This invitation was accepted and a team of staff members was selected to make the study. The personnel was selected as follows: One staff member to deal primarily with the school program, one with plant facilities, one with transportation, one with finance, one with reorganization planning, and one research specialist, who also was to be responsible for writing a report on the study.

The school program specialist examined the existing educational offerings in all the districts of the county, after which he established a minimum program which would be acceptable in the three projected administrative units. These curricula were planned for both the elementary and high school attendance centers and were as follows:

Kindergarten. The development of the child begins even before he enters school and centers about four growth factors: physical growth, social growth, emotional growth and intellectual growth.

The home plays an important part in the development of these four growth factors. As the child attains school age, he moves into a new experience, referred to as the kindergarten program, which should be a readiness program. Here the four growth factors are picked up where the child is and the teacher continues to give the parent assistance in developing these growth factors. The kindergarten is a laboratory for the proper kind of social development in which the child engages with pleasure in all types of self-expression. Lessons in cooperation, tolerance, self-control, citizenship and group living are learned by actual participation.

The kindergarten is also a workshop where the child can experiment freely with varied materials. Here, for him are the beginnings of: science, language expression, the arts, concepts of numbers and their relationships—all

together commonly referred to as the school curriculum. The school curriculum may be defined as all the experiences which pupils have while under the direction of a school, both in the classroom and extra-curricular activities, while at work as well as at play. All such activities should, therefore, promote the needs and the welfare of the individual and of society.

The State Department recommends kindergarten programs in all schools on a half-day basis.

Primary. As a child moves into the first grade, the readiness program should be repeated for review until most of the students are ready to begin formal reading.

The communication skills, commonly referred to as enrichment skills of language and literature, play an important role in the development of reading. Science, health and social studies are taught as a correlated subject at this level. Number concepts or beginning of arithmetic, is introduced. Pupils should be given an opportunity to share in music, art and health.

As a child moves into the second grade, the numbers referred to is thought of as arithmetic. Social studies take on the teaching of citizenship through bringing in the home and community living. Social science moves into natural science and physical science, and stress is placed on health. All the communication skills are stressed through the language arts, literature, music, including writing, speaking, listening and reading.

As a child moves into intermediate grades, consisting of third, fourth, fifth and sixth grades, the child needs to gain independence, be able to make application to any situation, develop leadership and be willing to accept guidance and counseling. The following learning areas should be developed in the intermediate grades and carried on through the high school: Communications, mathematics, languages, science, social studies, vocational education and practical arts.

Communication Skills. Every teacher from the first grade through high school should consider himself a teacher of communications, including writing, speaking, listening and reading. Within the area of communications, courses should be provided on the high school level in the following:

9th grade English	Journalism
10th grade English	Discussion and Debate
11th grade English	Interpretation and Drama
Language Contemporary Life	Remedial Reading
English Literature	

The State Department recommends four years of communication skills.

Mathematics. Mathematics should be taught with meaning so that the pupils will learn to think quantitatively. There should be sufficient drill with understanding to enable pupils to develop speed and accuracy. Within the area of mathematics, courses should be provided in:

Basic Mathematics	Consumer Mathematics
Intermediate Algebra	Advanced Mathematics
Geometry	

¹ State Department of Public Instruction Bulletins, No. 554A-595AF, *Reorganization Survey, Fayette County*, and No. 154A-463AF, *Louisa County Proposed Reorganization Report*.

The State Department recommends three and one-half years of mathematics.

Foreign Languages. In the area of foreign language, courses should be provided in:

Latin	Spanish
French	German

The State Department recommends two years at least in one foreign language.

Science. The science program should help pupils to develop appreciation, interest and logical habits of thought relative to adjustment to their physical environment. A well-organized program in science should be established in the elementary school. Pupils in the science classes should be encouraged to use the scientific method of thinking in their approach to all problems which they meet. The instruction should develop broad interests in science and the application of these interests to every-day situations. A sink and running water is important in the elementary grades. However, expensive equipment is not necessary since most equipment can be improvised. The science room for the high school level should have a demonstration table with running water and gas as well as individual tables for pupils to perform their own experiments. There should also be an adequate supply of equipment. On the high school level courses should be provided in:

General Science	Chemistry
Biology	Physics

Social Studies. Social studies should be taught in such a way that the pupils develop a better understanding and appreciation of the democratic way of life. History, geography, economics and civics should be taught as related subjects. In the intermediate grades this would necessitate having larger blocks of time. Emphasis should be placed upon the development of understanding, attitudes, skills and critical thinking as well as on the acquisition of facts. Students should be encouraged to study current problems even though these problems may be highly controversial. Sufficient globes, maps, charts, tack boards and audio-visual aids should be available to enrich this area. On the high school level, courses should be offered in:

Social Studies I, Old World Background
 Social Studies II, The Modern World
 Social Studies III, American History
 Social Studies IV, Modern Problems

The State Department recommends four years of social studies.

Vocational. The curriculum should make provisions for vocational courses in areas where the demand is sufficient. It should make provisions for those pupils going directly into employment following high school, as well as those going to college. On the high school level courses should be provided in:

Vocational Homemaking
 Vocational Agriculture and/or
 Trades and Industries or
 Distributive Education

In the vocational area may also be included such

courses as:

Typewriting	Office Practice
Shorthand	Bookkeeping

The State Department recommends four years of vocational study.

Practical Arts. In the learning area of the practical arts, it is recommended that the courses be offered as follows:

General Agriculture
 Industrial Arts (woodwork, plastic, leather and metal crafts)
 Auto Mechanics
 General Homemaking

In the practical arts area personal typewriting, shorthand, bookkeeping, and general business training may be offered.

The State Department recommends four years of practical arts.

Fine Arts. The fine arts courses should offer opportunities to all pupils regardless of special talents. There should be instruction in music in all grades by a qualified instructor. Group singing for enjoyment and the development of music appreciation plays an important part in the music program. The school should also make provisions for individual and class instruction in instrumental music. Art instruction should be provided in all grades by a qualified instructor. Courses should be provided in:

Art
 Vocal Music
 Instrumental Music

These courses may be carried with or without credit.

The State Department recommends that art, vocal and instrumental music be offered.

Additional Service Areas. The schools should have an adequate program for the development of strong, healthy bodies, sound health habits, good social adjustment and wholesome physical recreational interests. The dental program, the vision testing program, the hearing and speech screening programs are services begun at the kindergarten year and continued through the twelfth grade. The school should provide the services of a school nurse and require physical examinations on a yearly basis by the family physician and dentist.

There should be a well-rounded physical education program handled by a competent instructor. The school should organize an effective intra-mural athletic program in which all children can participate. The schedule should be arranged in such a way that the inter-scholastic teams do not crowd intra-mural athletic programs in which all children can participate, nor crowd intra-mural groups out of the necessary facilities. Safety units and school patrols should be provided throughout the grades. Safety education and driver education should be included in the high school curriculum.

Guidance. Guidance and counseling are recognized as indispensable to the successful school on both the elementary and secondary levels, hence provisions should be made to include them in the school program.

The classroom teacher is closer to the pupils than any other individual, therefore, every teacher should be a teacher of guidance; however, the activities need to be guided by a counselor or guidance director. A complete testing program and informative system of cumulative records readily accessible to the individual teacher formulates the basis of a good guidance program.

The State Department recommends that each school provides a guidance counselor to correlate the guidance program throughout the school.

Miscellaneous Considerations to the Educational Program. In order to provide a good educational program including the above curriculum many other factors are involved such as the following:

Each classroom should have a well qualified teacher. Whenever possible four years of college training should be required.

The rooms should be adequately lighted. It is recommended that in the ordinary classroom 20 to 40 foot candles of light should be available and equally distributed to all parts of the room, while in the science rooms, industrial arts, homemaking and other rooms where close work is required there should be 50 or more foot candles of light.

The classroom should be of adequate size. Kindergarten rooms should be at least 1,200 square feet in area and other elementary rooms at least 900 to 1,000 square feet in area. However, a regular high school classroom may be smaller, depending upon its use.

It is also recommended that the teacher load should range from 20 to 25 and not over 30 pupils with one teacher per grade.

Classrooms should be decorated in pastel colors to avoid eye strain.

Rooms should have sufficient open shelves to accommodate an attractive reading or library corner. A wide range of reading material needs to be provided to encourage pupils to read within their ability. The Department recommends at least an expenditure of \$2.00 per student per year for reading material.

Bulletin boards or tack boards should be available in all elementary rooms in sufficient amount to exhibit the work of the pupils. Sufficient globes, maps, and charts for the appropriate grade levels should be provided. A daylight projection screen is an important piece of equipment so that audio-visual aids may be used.

Cumulative records should be maintained for each pupil, and should be accessible for the teacher's use, preferably in the teacher's classroom. A complete testing program should also be provided. In the elementary grades this would include tests of mental ability, achievement tests and a complete battery of guidance tests including ability, aptitude and personal interest tests.

Today the schools have a responsibility for educating the whole child and it is only through a well-rounded educational program, including the curriculum and facilities outlined above, that this can be accomplished.

Other Factors Studied in the Louisa Plan. The boundaries of the proposed new administrative units, the type of organization (6-6, 6-3-3, or 8-4), the location of elementary and secondary attendance centers to be used or established, and the area to be served by each were determined cooperatively by the county board and the State Department. The county board was given primary responsibility in these matters.

After these four factors were determined, the survey team obtained the data on the number of pupils to be served by each administrative unit by grades.

Plant Facilities. The plant facilities specialist made a comprehensive study of existing school plants and recommended new facilities needed and alterations and improvements necessary to accommodate the pupils assigned to each designated attendance center. He also estimated costs of repairs and alterations to existing buildings, costs of sites, and costs of new construction needed.

Transportation. All pupils that would require transportation to any attendance center were spotted on a map of the area.

The transportation division of the Department of Public Instruction worked out a detailed transportation system for one proposed administrative unit of Louisa County considering the location of bus routes on these principles:

1. Service to be from the driveway entrance, insofar as possible, for all pupils transported.
2. Maximum riding time for any pupil to be kept within the reasonable limits of 75 minutes for high school pupils and 50 minutes for elementary pupils.
3. A sufficient number of buses:
 - a. To transport all pupils without requiring groups of pupils to wait for a bus in the evening after school is dismissed.
 - b. To eliminate the necessity of delivering pupils to school in the morning early enough to enable the bus to make another trip.
4. Opening and closing hours for the daily program in the elementary schools and the high school in the district to be approximately the same.
5. Considerations for economy of service to be limited only by requirements for safety and reasonably efficient and convenient service to the pupils transported.

Separate maps were prepared showing elementary and high school routes. Tables were prepared showing route numbers, capacity of buses for each route, number of pupils to be transported, elementary or secondary pupils being transported, and number of stops and miles traveled.

A narrative description of each route was also included by the transportation specialists. Composite transportation data were presented for the existing districts which now provide transportation. Information shown included the number of buses, average age of buses, average number of pupils transported, average bus route mileage, total yearly cost, and cost per pupil per year, and other

pertinent factors. Some comparisons were then made between the projected transportation system for new administrative units and those now in operation serving the same pupils and the same area.

Finance. A fourth member of the survey team made a complete analysis of each district in the county, its operating costs, its per pupil cost, its existing millage rate, and its ability to construct, maintain and operate adequate schools.

In projecting the anticipated financial structure of new administrative districts, the number of teachers, special teachers and administrative persons needed in each administrative unit were determined and theoretically employed at the going wage. The total personnel costs were then determined. The cost was then used as two-thirds of the total needed costs. From this total the anticipated per pupil costs and the millage rates were estimated. The assessed valuations for each administrative unit were a matter of record. Building costs and transportation costs were considered to be a part of the one-third expansion applied to personnel total costs.

Final Procedures in the Louisa Plan. Another member of the survey team examined the possibilities of alternate plans for redistricting of the county and made a documentation of the advantages and disadvantages of these alternate plans as compared with those originally agreed on for the study.

A sixth member of the team was assigned the responsibility of writing and editing a formal report of the whole study.

The survey team then reported as a group to the county board of education. At this meeting the staff team went into detail as to the advantages and disadvantages of the plan. They attempted to answer all questions posed by county board members and the county superintendent. They discussed and helped plan the public relations program that might follow the announcement of the State Department's report to the county board.

The above procedure used as a pattern for continued study in the 99 counties of Iowa might well serve as one recommended approach to ultimately acquiring acceptable school districts in the state through comprehensive and detailed planning. As a result of this procedure, public relations work at the local level could be based upon factual information so documented as to reveal the advantages and disadvantages of any proposed administrative unit.

VI. The Future of Iowa School Districts

In order to summarize the future actions which will implement school district reorganization in Iowa, one must explore the possibilities of actions that have some support publicly within the state.

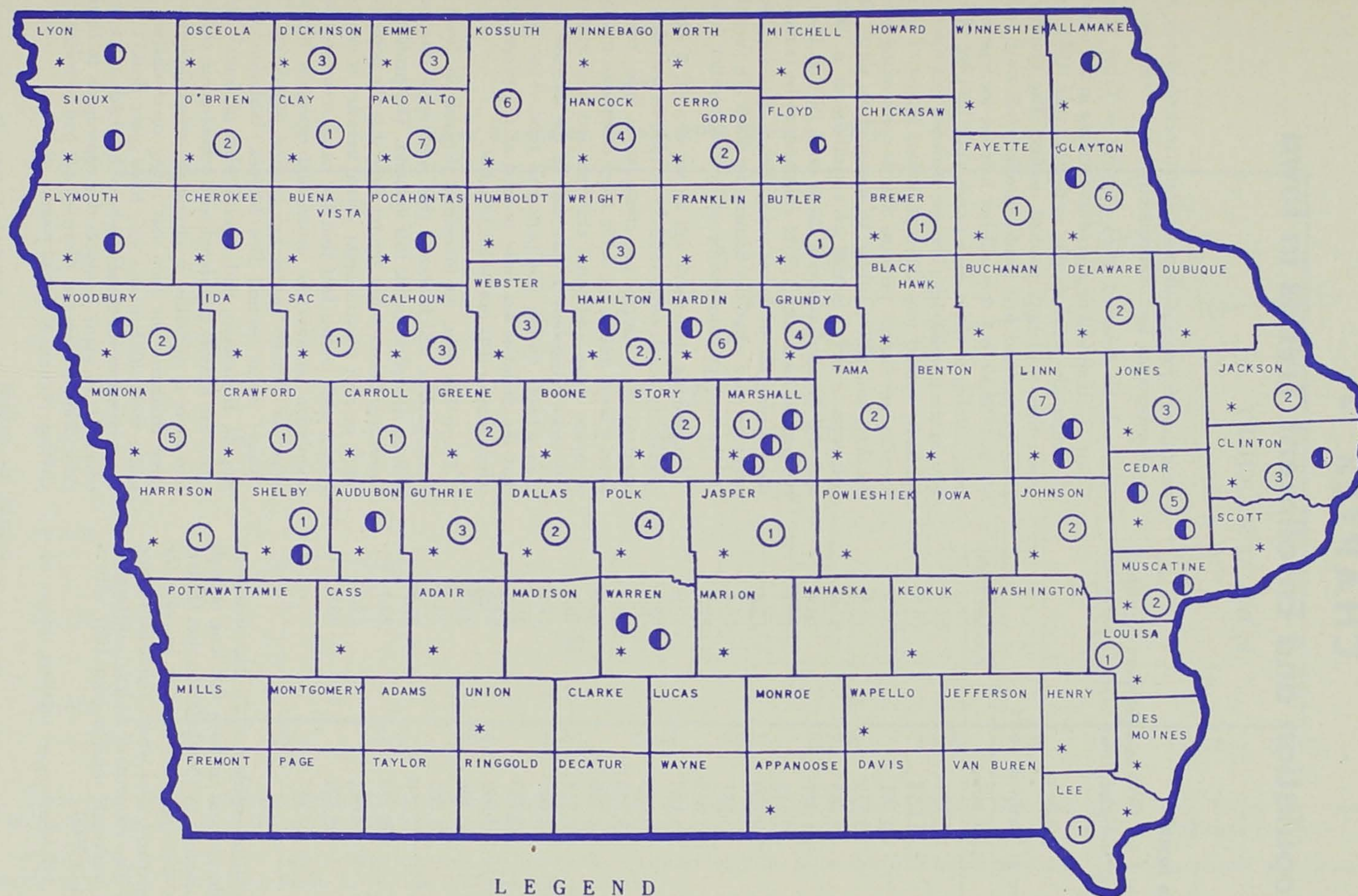
There seems to be two schools of thought emerging at present. One school believes in driving toward the goal of effecting sound basic administrative units through a public relations program which emanates from sources close to the local district. This program should be guided

by local professional leadership, with assistance from the personnel at the intermediate level and the state level. This philosophy incorporates the idea of permissive legislative procedure. It anticipates some sort of incentive aids from the state and some rather low minimum standards. This thinking presupposes that the people will discover for themselves that the advantages outweigh the disadvantages and as a result they will establish acceptable units for themselves through democratic processes.

Within the state can be found many persons who belong to a second school of thought. They are frankly saying that the process being employed and briefly described above is too cumbersome and that progress is and will continue to be too slow. Their contention is that the legislature is in reality the supreme school board in the state. Any authority and responsibility now exercised by local school districts through their boards of education was originally delegated to them by the legislature and that it is the duty and responsibility of this body to see that more sound basic districts are planned and then effected by legislative mandate.

The answer as to which of these two approaches will be followed in future years is of course entirely dependent upon the action of the legislatures. In any event, those people responsible for administering public education in the state can agree on the following fundamental principles which should guide their actions:

1. That all of the area of the state should be in a 12-grade district.
2. That every district should enroll in public schools a minimum of 600 pupils.
3. That every effort should be made to urge the legislature to enact legislation which will encourage the standards set forth in items 1 and 2,
 - a. By incentive aids
 - b. By liberalizing voting procedure
 - c. By legislating reasonable minimum standards for administrative units.
 - d. By setting target or deadline dates at which time reasonable progress shall be in evidence.
4. That adequate planning should be done toward more adequate districts.
5. That planning should be done by using as the planning area each of the 99 counties in the state.
6. That the state department, state educational institutions of higher learning, and other agencies should provide a pattern for use by county boards and local districts to carry on objective surveys and studies of proposed new districts.
7. That resource personnel should be made available, insofar as possible, by the agencies wherever they are needed and requested. They should include specialists in curriculum, plant facilities, transportation, public school finance and public relations.



LEGEND

- * REORGANIZATION COUNTY PLAN FILED
- (3) NO. OF NEW DISTRICTS FORMED
- (1 half-filled circle) NEW DISTRICTS IN PROCESS OF BEING FORMED

CHAPTER 3

Population and Enrollment Trends in Iowa

by WM. M. SLAICHERT

VII. The Picture in Iowa

The data in Table I for 1930 to 1954 were furnished by the Bureau of Vital Statistics, Iowa State Department of Health.

Table I
Rate of Births in Iowa

Year	Live Births	Rate per 1,000
1930	42,733	17.3
1931	41,633	16.8
1932	40,164	16.2
1933	39,575	15.9
1934	42,463	17.0
1935	41,021	16.4
1936	42,973	17.1
1937	42,369	16.8
1938	43,881	17.4
1939	43,942	17.3
1940	45,433	17.9
1941	46,825	18.4
1942	49,235	19.3
1943	48,209	18.8
1944	46,914	18.2
1945	44,497	17.2
1946	55,743	21.5
1947	63,536	24.5
1948	60,396	23.2
1949	61,765	23.6
1950	62,550	23.8
1951	66,123	25.1
1952	64,091	24.3
1953	62,521	24.0
1954	63,747	-----

On the basis of birth records and the fact that over 95 per cent of children born in Iowa live long enough to start school, the forecast to 1966 indicates that kindergarten enrollments will show a consistent increase for the next four or five years, after which a gradual decline should take place. The elementary schools will tend to grow more or less uniformly until at least 1961 with a crest being reached in 1960.

More children will mean more teachers, larger ex-

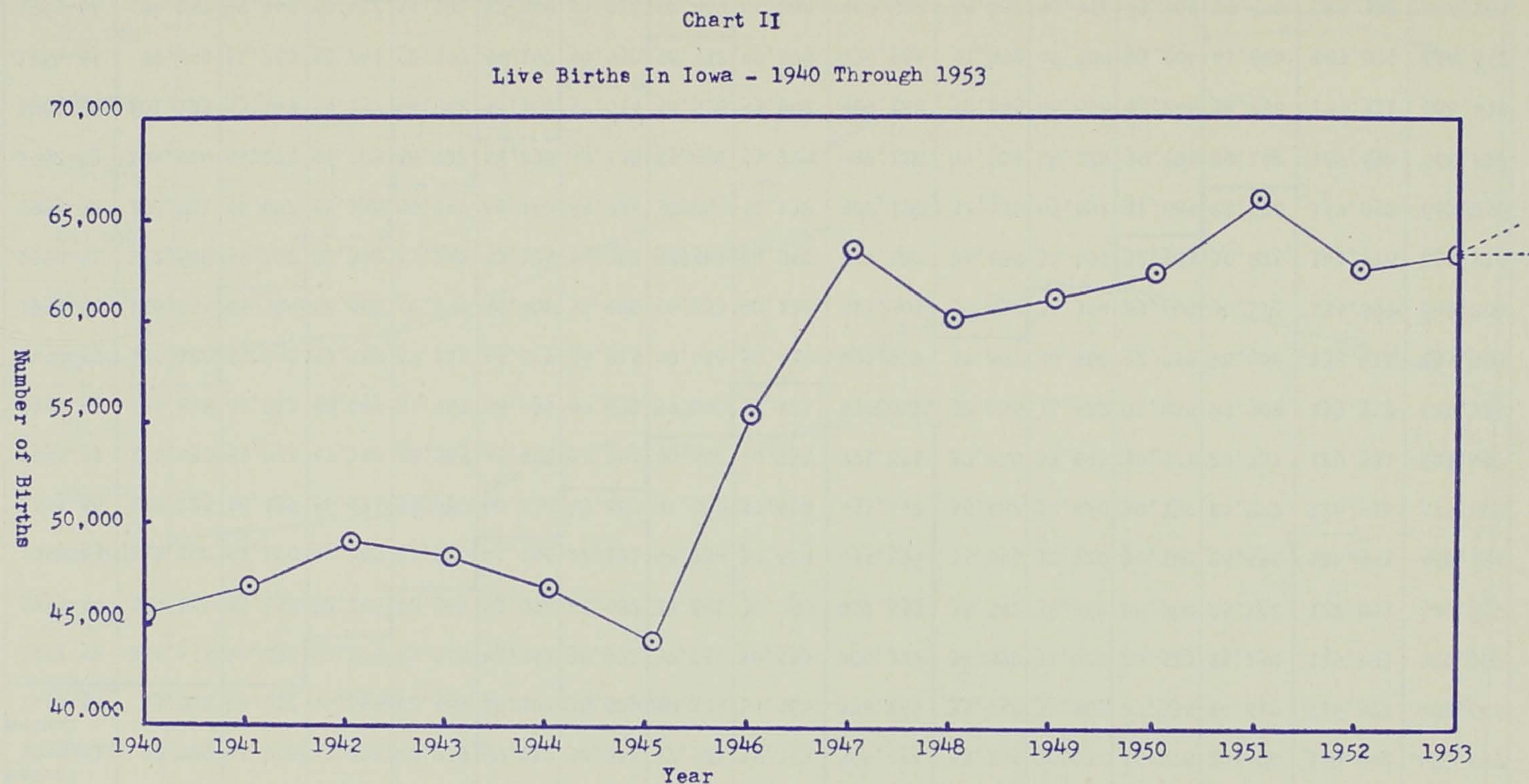
penditures for operation and maintenance of schools, and more classrooms and consequently more total costs.

As will be observed from a study of Table II and Chart II, there will be a gradual increase in the number of elementary school pupils until the year 1961 after which there will be a gradual decline. The number of kindergarten and first grade enrollees will start falling off in 1958-59, but this will not halt the increase in the total number of elementary pupils until 1961-62. Naturally, as the lower grades become crowded this wave will gradually extend into the high school grades. The elementary enrollment problem that is confronting school districts, and will continue to harass them until 1961, will begin to be felt in high school enrollment in 1960-61 and will demand attention there until 1970 at least. If the present birth rate (1954) continues to be fairly constant during the next few years, then it is reasonable to conclude that whatever housing facilities are furnished for the next 15 years will be utilized for another decade.

Considering that there will be an increase of 113,746 elementary pupils from 1952-53 to 1960-61 and that the standard of 30 pupils per classroom is used, then the Iowa schools must have 3,792 more classrooms available to house these additional children and approximately 793 more classrooms to take care of the increase in the high schools during this period of time. This assumes that the facilities are fully utilized at the present time which may or may not be the situation.

There has been an increasing demand in Iowa for kindergartens which means that additional classrooms will be needed to fulfill this demand. The problem becomes more acute when figures show that the population tends to drift toward areas where industry is centered. It is a well known fact that the rural areas are losing population whereas the urban and especially the suburban or "fringe" areas are gaining population. The "fringe" areas around Des Moines, Waterloo, Cedar Rapids, Burlington, and several other of Iowa's larger cities, are heavily populated with school-going children, and there is difficulty in providing school facilities for these children. The fact that many rural districts are losing their children and may have space doesn't lessen the problem in the districts where the children are being educated. In many instances this contributes to housing difficulties, and several districts have had to refuse rural children because of lack of room.

* This chapter is a continuation of Chapter III of the First Phase of the Survey published October 1, 1952. The tables used are similar and much of the language is exactly the same.



There were 66,123 children born in Iowa in 1951, 64,091 births in 1952 and 62,521 births in 1953. This means that over 48 per cent more children will become of school age in 1956 than in 1945, 44 per cent more in 1957 than in 1945, and 40 per cent more in 1958 than in 1945.

From 1946 to 1953 there was a large increase in live births. Coupled with this is the fact that infant mortality (infants under one year of age) decreased from 53.9 per 1,000 births in 1930 to 21.7 per 1,000 in 1953.

The 1946 increase started to Kindergarten in the fall of 1951 and the 1951 increase will start to kindergarten in the fall of 1956.

The trend in Chart II is similar to the national trend.

Table II*

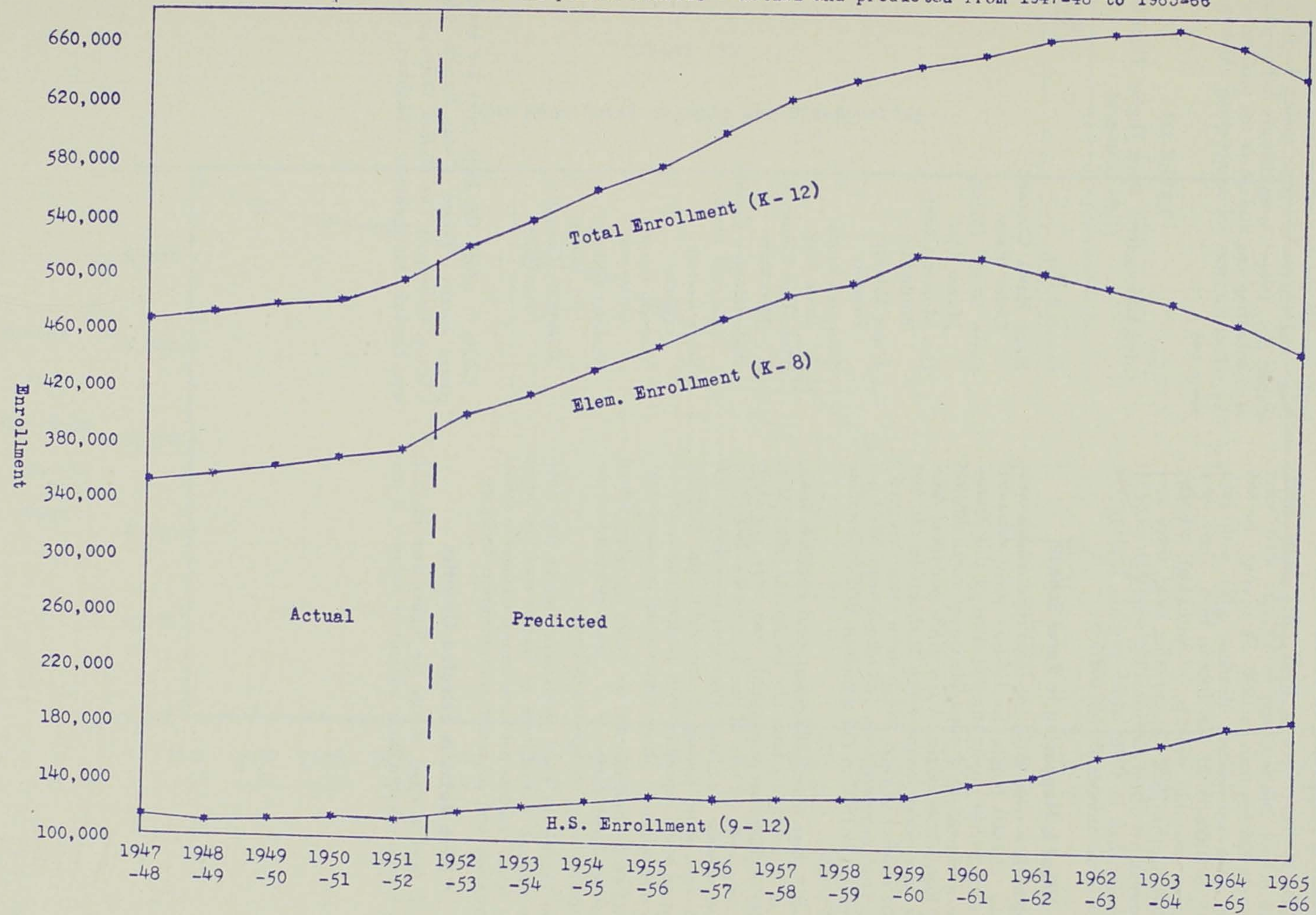
PREDICTION OF IOWA'S FUTURE SCHOOL ENROLLMENT BY GRADES

School Year	Elementary School Grades								Total Elem. K - 8	High School Grades				Total H.S. 9-12	Total Enroll. K-12
	Kdg. & 1	2	3	4	5	6	7	8		9	10	11	12		
actual 1948-49	90,948	42,025	40,117	38,958	38,527	36,300	35,689	33,528	356,092	30,840	28,574	26,831	24,899	111,144	467,236
actual 1949-50	90,798	44,505	41,524	39,592	38,662	37,777	36,038	34,593	363,489	31,965	29,121	26,503	24,823	112,412	475,901
actual 1950-51	88,729	45,768	43,875	40,719	39,117	38,013	37,581	35,253	369,055	33,165	30,037	26,970	24,470	114,642	483,697
actual 1951-52	93,042	44,022	44,653	42,564	39,807	38,074	37,521	36,586	376,269	33,458	30,968	27,334	24,617	116,377	492,646
1952-53	115,355	42,833	43,275	43,713	41,963	38,971	37,751	36,533	400,394	34,892	31,420	28,523	25,158	119,993	520,387
1953-54	119,854	53,658	42,106	42,364	43,096	41,082	38,641	36,757	417,558	34,842	32,767	28,940	26,252	122,801	540,359
1954-55	118,142	61,170	52,747	41,220	41,766	42,191	40,734	37,624	435,594	35,055	32,720	30,180	26,636	124,591	560,185
1955-56	120,225	58,137	60,131	51,637	40,638	40,889	41,833	39,662	453,152	35,882	32,920	30,137	27,777	126,716	579,868
1956-57	124,439	59,455	57,150	58,865	50,908	39,785	40,542	40,732	471,876	37,826	33,697	30,321	27,737	129,581	601,457
1957-58	125,618	60,211	58,445	55,947	58,034	49,839	39,448	39,475	487,017	38,846	35,522	31,037	27,907	133,312	620,329
1958-59	120,120	63,650	59,189	57,215	55,157	56,815	49,416	38,410	499,972	37,647	36,480	32,718	28,566	135,411	635,383
1959-60	116,755	61,384	62,569	57,943	56,407	53,999	56,333	48,115	513,505	36,632	35,354	33,600	30,113	135,699	649,204
1960-61	112,668	59,140	60,342	61,252	57,125	55,222	53,541	54,850	514,140	45,887	34,401	32,563	30,925	143,776	657,916
1961-62	108,721	57,072	58,136	59,072	60,387	55,925	54,754	52,132	506,199	52,310	43,092	31,685	29,970	157,057	663,256
1962-63	104,914	55,072	56,103	56,912	58,238	59,119	55,451	53,313	499,122	49,718	49,124	39,690	29,162	167,694	666,816
1963-64	101,193	53,143	54,137	54,922	56,108	57,015	58,618	53,992	489,128	50,845	46,690	45,246	36,530	179,311	668,439
1964-65	97,558	51,283	52,241	52,997	54,147	54,930	56,532	57,075	476,763	51,492	47,749	43,004	41,644	183,889	660,652
1965-66	94,057	49,440	50,412	51,141	52,249	53,010	54,464	55,044	459,817	54,432	48,356	43,980	39,580	186,348	646,165

*Compiled by William M. Slaichert, Supervisor of Research

Chart III

Pupils enrolled in the public schools - actual and predicted from 1947-48 to 1965-66



What is Happening to School Districts

In 1935-36 there were in Iowa 2,812 Rural Independent School Districts, and in 1952-53 there were 2,586—only 226 less than in 1936. There were also 589 city or town independent districts, (424 with high schools), in 1952-53, 57 less than in 1936. There were 937 school township districts, (7 with high schools) or 84 less than in 1936. On the other hand, there were 443 consolidated school districts, (402 with high schools) or 32 *more* than in 1936, which partially explains the decrease in the number of rural districts.

What is Happening to Rural Schools

In 1936 there were 9,018 one-room rural schools open enrolling 130,089 pupils. In 1952-53 there remained 3,992 with 59,549 pupils enrolled. Part of this change can be attributed to a consolidation of rural districts with a high school district. A few of the one-room rural schools have added rooms which is shown by the fact that the number of rural two-or-more room elementary schools have increased from 166 schools with 7,962 pupils enrolled in 1936 to 239 schools in 1952-53 enrolling 16,304 pupils.

In 1953 there were 2,885 closed rural schools in Iowa, many of them having been idle for several years. Most of these buildings are combustible—one story, one-classroom structures, on sites of one acre or less, heated by a stove, window ventilated, floor area from 400 to 800 square feet, some having electric lights, the majority having no water available, with outdoor toilets, and all being unsatisfactory plants that should be abandoned.

Children in these districts are either attending school in a consolidated district or in a town independent district and are being transported by buses.

The change in rural enrollment figures has come about through a multitude of factors such as larger farms, fewer children per farm family, changes in school organization and in better transportation facilities.

Birth Rates in Selected Counties

Birth rates in cities usually are higher than in rural areas except where a large amount of industry is cen-

tered and then there is a tendency for laboring folks to settle outside the city where land is cheaper, rents are lower, and where there is no zoning. In Iowa there are certain city "fringe" areas that are full of young families of childbearing age, and where the problem of establishing school facilities for school-going children is a most acute one.

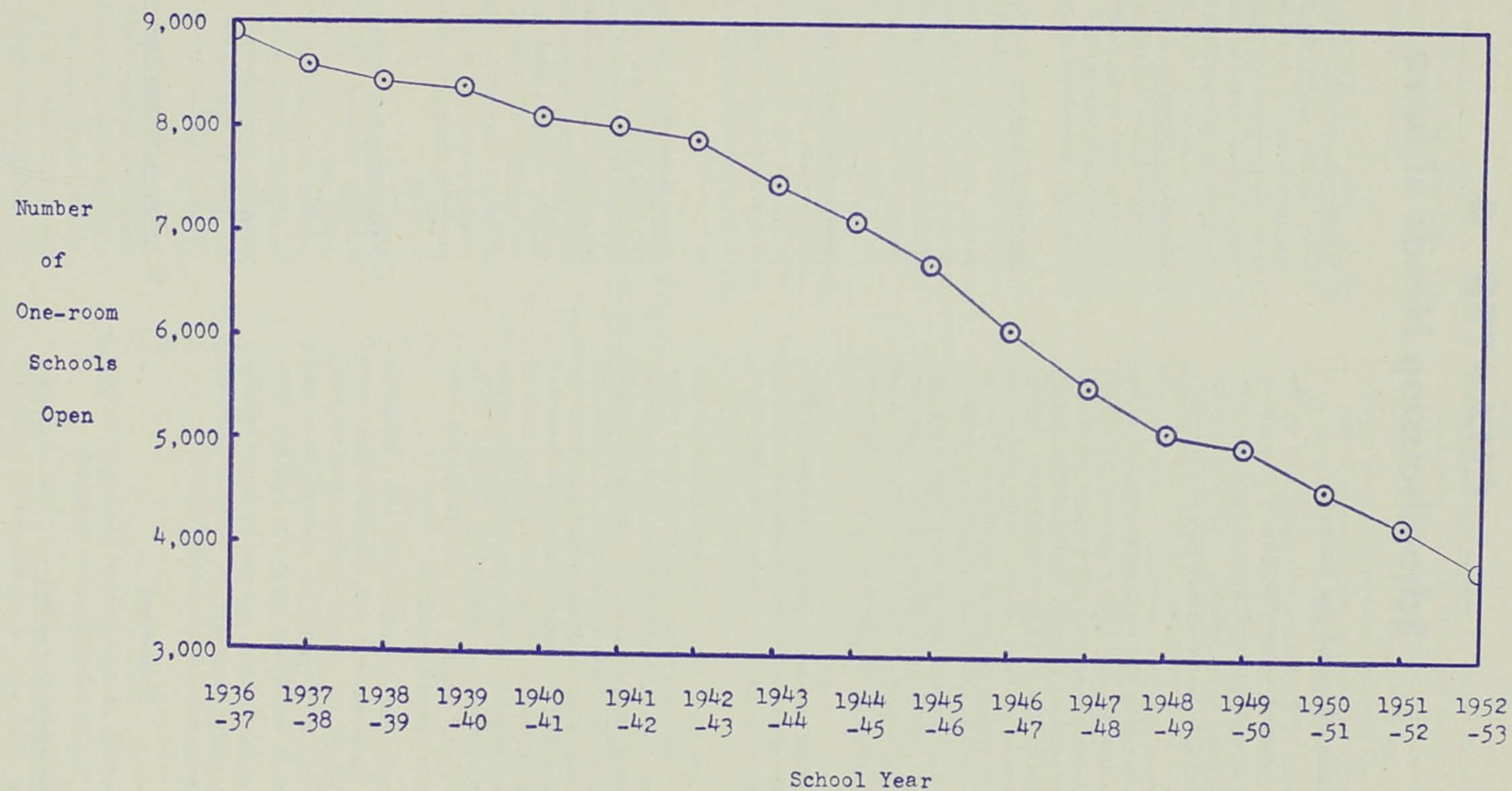
TABLE III
Cities Having Birth Rates Higher Than County
(1953 Statistics)

County & City	Birth Rate Per 1,000 Population
Black Hawk County	27.5
Cedar Falls	28.3
Cerro Gordo County	23.9
Mason City	25.4
Des Moines County	23.7
Burlington	23.8
Jasper County	24.4
Newton	26.9
Johnson County	30.2
Iowa City	36.8
Muscatine County	23.3
Muscatine	23.4
Pottawattamie County	24.6
Council Bluffs	26.0
Story County	27.8
Ames	35.8
Wapello County	24.9
Ottumwa	26.8
Webster County	27.2
Fort Dodge	30.0
Woodbury County	27.5
Sioux City	27.9

Cities in which the birth rates are lower than the parent county: Boone, Cedar Rapids, Charles City, Clinton, Davenport, Des Moines, Dubuque, Fort Madison, Keokuk, Marshalltown, Oskaloosa, and Waterloo.

Chart IV

One Room Rural Schools are Dissapearing



CHAPTER 4

Schoolhousing Needs of Iowa

Second Phase of the Survey

The second phase of the Survey was predicated on the premise of "a state-wide master plan for a program of school plant construction according to existing and contemplated satisfactory administrative units and according to suitable school centers serving logical attendance areas."

The manner in which this long-range program is being studied and handled has been explained previously in this report. It will be several years before all the 99 counties of Iowa can be covered by the survey group. In the meantime it was considered purposeful if each school district would evaluate its own needs and report them. This might appear at first to result in a biased or exaggerated survey but on the other hand, no one knows more clearly what facilities are needed than those directly in contact with local situations. In fact, the sum of facilities needed might even be less under this treatment than if a group of "experts" worked on the problem.

Under the present status of school districts and school laws in Iowa the study of needed facilities as explained above is thought to be the best procedure at the present time.

In order to get basic data, questionnaires were sent to every county superintendent and every high school district in Iowa. The information from these questionnaires was studied and tabulated by the Supervisor of Plant Facilities in the State Department of Public Instruction. He and other building consultants from the State Department and the State University of Iowa had made personal surveys of 233 school districts, most of them high school districts, besides consulting with school boards and school officials of many other districts. Then, too, surveys of several counties and parts of counties were made by the Department Committee.

As data from the questionnaires were tabulated changes were made where it was thought reports were exorbitant in claims for needed facilities and resulting costs. The average of 30 pupils per classroom was used as a standard as was \$15 a sq. ft. for building costs.

The results of the needs as reported by school officials and modified where necessary by State Department members are presented in the pages that follow.

Definitions

Following is a list of definitions of terms used in both sections of the Survey unless otherwise specified:

1. **Local School Administration Unit—** The city, town, county, or other type of school district under the jurisdiction of a local school board.

2. **School—** A school center serving an attendance area, usually under the supervision of a principal (see definition 5). A school may accommodate any type of program or any combination of grades. Some schools occupy more than one building on the same or on separate sites.

3. **Elementary School—** A school composed of any span of grades below the secondary school, as determined by state and local practice, e.g., K-6 or 1-8. Includes kindergarten and nursery school if under direction of the local school board.

4. **Secondary School—** A school composed of any span of grades above the elementary school, including junior high schools, senior high schools, vocational schools, and grades 13 and 14 if under the direction of the local school board. For the purposes of this Survey, if two or more secondary schools are housed in the same plant, count as only one school.

5. **Combined Elementary and Secondary School—** Any combination of elementary and secondary grades occupying the same school plant. For the purposes of this Survey, count these as one "combined elementary and secondary school," rather than as two separate schools.

6. **School Building—** For the purposes of this Survey, this term means one continuous structure which may or may not be connected with other structures by passageways. The building includes plumbing, heating, ventilating, mechanical and electrical work; and lockers, cabinets and shelves which are built into the building. The cost of a building includes fees for architects, engineers, supervisors and other professional services and overhead costs in connection with planning, designing, financing, and constructing the building.

7. **Classroom—** Any room originally designed, or later suitably adapted, to accommodate some form of group instruction on a day-by-day basis and available for such purposes as of June 30, 1954, excluding such areas as auditoriums, gymnasiums, lunchrooms, libraries, and study halls. Unless otherwise specifically noted in this Survey, the term "classrooms" includes special instruction rooms.

8. **Special Instruction Room—** A laboratory, shop or other room designed and equipped for instruction in a special subject such as homemaking, industrial arts, science, music and art. Not included as a "special instruction room" is any regular classroom which is not designed and equipped for instruction in a particular subject.

9. **Site**—Land and all improvements other than structures.
10. **School Plant**—The term school plant or plant is used in this Survey to include the site, the buildings, and the equipment and furniture which constitutes the physical facilities available for a school.
11. **Story**—A basement is counted as a story if the ceiling is nine feet or more above the highest grade level next to the classroom windows.
12. **Rehabilitating and Remodeling**—As used in this Survey, these terms mean a change in structure or a major structural improvement to the building (such as changes of partitions, roof structure, of exterior walls) and general overhauling of a building or major section thereof in order to adapt the plant to continued and effective use for the school program. As used in this Survey, these terms do not include normal maintenance programs or periodic renovation.
13. **Area of Building**—The sum of the areas in square feet of all floors within the building perimeter at the respective floor levels. Included in the total building area is one-half of area of covered passageways with one or both sides open.
14. **Multi-purpose Room**—A multi-purpose room is a room used for activities not provided for elsewhere.
15. **Community Room**—A multi-purpose room is so classified when it houses mostly school classes and meetings. It becomes a community room when the

general public uses it most of the time both day and night.

16. **Outside Classrooms**—If shops, music, lunch room, vocational classes, etc., are housed in a separate building, built or improvised on the site, they count as a part of the regular building, providing they were designed and built expressly for their respective uses. This should not be confused with Sub-Standard or Non-Publicly-Owned Facilities.

The Changing Scene

Iowa is slowly awakening to its school problems.

The first section of the Survey published in October 1952 showed that by September 1952 there was a need of 2,942 new classrooms to relieve over-crowding, to replace obsolete buildings, and to house enrollment increases. These were rooms designed or adapted to accommodate some form of group instruction on a day-by-day basis and did not include such areas as auditoriums, gymnasiums, lunchrooms, stadiums, libraries, and study halls.

Tables IV and V give a list of facilities provided from July 1, 1951 to June 30, 1954 and the cost of such facilities. Table VI shows the number of special rooms or facilities available in Iowa as of July 1, 1954. Table VIII lists the classrooms available July 1, 1954 and the number needed by September 1959. This list includes also the special rooms enumerated in Table VI. It lists all rooms where any class of instruction is held but does not include lunch rooms, study halls, auditoriums or gymnasiums or any other room built for activities rather than classroom instruction.

TABLE IV. FACILITIES PROVIDED JULY 1, 1951 - JUNE 30, 1954

Type of Facilities or Rooms	DISTRICTS WITH HIGH SCHOOLS			RURAL DISTRICTS		
	Number Provided	Number Lost	Total Gained	Number Provided	Number Lost	Total Gained
Elementary Classrooms	1391	214	*1177	101	25	* 76
Kindergarten	175	23	* 152	11	2	* 9
High School Classrooms	382	45	* 337			
Science	49	10	* 39			
Industrial Arts	120	35	* 85			
Vocational Agriculture & Shop	84	7	* 77			
Business Education	42	8	* 34			
Music	163	17	* 146			
Art	18	3	* 15			
Library	18	6	12			
Library-Study Hall	25	10	15			
Gymnasium	32	28	4			
Auditorium	12	8	4			
Auditorium-Gymnasium	103	12	91	1	0	1
Lunch	132	20	112	2	0	2
Multi-Purpose	87	6	81	9	0	9
Nurse's Room	82	1	81	6	0	6

* These are included in the total of all rooms used for regular classroom purposes.

TABLE IV. FACILITIES PROVIDED JULY 1, 1951 - JUNE 30, 1954—Continued

Type of Facilities or Rooms	<u>DISTRICTS WITH HIGH SCHOOLS</u>			<u>RURAL DISTRICTS</u>		
	Number Provided	Number Lost	Total Gained	Number Provided	Number Lost	Total Gained
Community Room	18	1	17			
Homemaking	23	1	* 22			
Visual Education	4	0	* 4			
Stadium	2	0	2			
Special Education	1	0	* 1			
Bus Garages	61	4	57			
Total.....			*2089			* 85
Grand Total.....			2176			103

* These are included in the total of all rooms used for regular classroom purposes.

The classrooms added in the rural schools were centered in 13 counties with most construction taking place in Scott, Linn, Pottawattamie and Black Hawk Counties where elementary plants were erected to take care of children in the "fringe" areas of the cities of Davenport, Cedar Rapids, Council Bluffs, and Waterloo.

The cost of the facilities as enumerated in Table IV ran about as follows:

TABLE V.

<u>COST OF FACILITIES PROVIDED</u>	
<u>TYPE OF PROJECT</u>	<u>CONSTRUCTION COSTS</u>
New buildings on new sites. (91 projects)	\$24,035,985.00
New buildings and additions to buildings on sites already owned by school districts. (210 projects)	\$35,113,968.00
Remodeling or rehabilitation of existing buildings to improve facilities now being used or to make idle facilities usable. (259 projects)	\$ 2,781,793.00
Total.....	\$61,931,746.00
Cost of Rural Construction	\$ 1,822,605.00
Architects Fees	3,237,584.00
Cost of Site and/or Site Improvement	3,915,194.00
Cost of Equipment	5,254,907.00
Total Spent on Educational Facilities.....	\$76,162,036.00

This includes bus garages, new sites, superintendents' homes, classrooms, stadiums, improvement of sites, equipment, architects fees and all special rooms and facilities.

The rate of interest on bonds ran from 1% to 3½% with the average rate at 2.16% (237 projects).

TABLE VI.

FACILITIES NOW AVAILABLE

July 1, 1954

Type of Room	July 1, 1951 No. of Units	July 1, 1954 No. of Units	Added Facilities 1951-1954
Kindergarten	949	1101	152
Science	894	933	39
Industrial Arts or Vocational Shop	1055	1117	162
Homemaking	1047	1069	22
Music	933	1079	146
Art	251	266	15
Business Education	892	928	36
Library	513	525	12
Gymnasium	484	488	4
Auditorium	327	331	4
Auditorium-Gymnasium	593	684	91
Cafeteria) Cafetorium) Lunch	497) 56)	665	112
Multi-Purpose Room	283	364	81
Community Room	65	82	17
Medical Suite	264	345	81
Bus Garage	521	578	57
Elementary Classrooms			1177
High School Classrooms			337
Visual Education			4
Special Education			1
Stadium			2
Library-Study Hall			15

This table does not include regular elementary and high school classrooms as many of them in high schools are used as interchangeable classrooms where several subjects might be taught. For example, in some small high schools history and mathematics might be taught in a so-called science room. Such a room then would be an interchangeable classroom rather than a science room. Table VI includes only those special rooms that are used for a certain designated subject or activity.

TABLE VII.

CHANGE IN DISTRICT BOUNDARY LINES

By July 1, 1951 there were 840 high school administrative units in Iowa. By July 1, 1954 this had dropped to 822, a decrease of 18.

A statement from these 822 high school districts as to what changes had taken place in the size of their districts from July 1, 1951 to July 1, 1954 listed:

165 were larger	229 didn't think there would be any reorganization in the near future.
5 were smaller	165 are already reorganized.
652 were the same	79 will be reorganized by September 1955.
	105 will be reorganized by September 1959.
	33 plan on reorganization after September 1959.
	211 no answer.

July 1, 1951 there were 3,809 elementary districts in Iowa. July 1, 1953 there were 3,585 such districts, a decrease of 224.

Where districts were enlarged, the increase came through the addition of rural territory bordering the central district. There is an increasing tendency toward the closing of the rural schools and the transporting of their pupils to some high school district. This is done mostly on a tuition basis. The tendency to become a part of the central district is much slower but has been gaining favor during the past two years.

The following table shows a breakdown of the number of one-room rural schools that were open between 1935 and 1955 and their enrollment:

<i>Year</i>	<i>Schools</i>	<i>Pupils</i>
1935-36	9,018	130,089
1950-51	4,628	68,995
1951-52	4,369	64,392
1952-53	3,992	59,549
1953-54	3,594	54,773
1954-55	3,261	50,777

Planning For the Future

The Second Phase of the Iowa School Facilities Survey is centered about a state-wide plan for the housing of school pupils up to the beginning of the 1959-60 school year. This state-wide plan is based on probable future enrollments, a study and appraisal of present school structures and how they might be used in the future, and an estimate of the new construction needed, and the amount of remodeling to be done to meet school needs until 1959-60. Such areas as educational program,

reorganization of school districts, and financial ability to pay must also be considered and studied in any state-wide plan for school housing.

As was stated earlier in this Report, the Iowa Survey does not attempt to offer solutions to all these problems because of the status of school districts at the present time. It does attempt, however, to investigate the problem of housing future enrollments under the conditions that exist in Iowa and, no doubt, will exist to 1959-60 at least. Although the educational program to be offered is the backbone of school planning, it will not be studied or discussed in this Report; that should be left for further research. The tables that follow are concerned chiefly with construction and finance available and needed in Iowa.

TABLE VIII.

CLASSROOMS NEEDED BY SEPTEMBER, 1959

1. Number of instruction rooms available in school plants now in use in Iowa:	
a. In elementary schools	5,358
b. In secondary schools	3,930
c. In combined elementary-secondary schools	10,078
Total	19,366
2. Number of instruction rooms under construction:	
a. In elementary schools	278
b. In secondary schools	170
c. In combined elementary-secondary schools	3,120
Total	3,568
3. Number of instruction rooms that would be abandoned and not used for any school purpose by the beginning of the 1959-60 school year:	
a. In elementary schools	426
b. In secondary schools	196
c. In combined elementary-secondary schools	482
Total	1,104
4. Net change (plus or minus) in the number of instruction rooms which would result from remodeling and conversion:	
a. In elementary schools	+54
b. In secondary schools	+55
c. In combined elementary-secondary schools	+245
Total	+354

TABLE VIII—Continued

5. Net number of instruction rooms that would be available by the beginning of the 1959-60 school year:	
a. In elementary schools	5,264
b. In secondary schools	3,959
c. In combined elementary-secondary schools	12,958
Total	22,181

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TABLE IX.

SCHOOL CENTERS NEEDED BY SEPTEMBER 1959

(Schools or School Centers Serving Attendance Areas)

1. Number of school centers now in use in Iowa:	
a. Elementary school centers	492
b. Secondary school centers	170
c. Combined elementary-secondary school centers	722
Total	1,384
2. Number of new school centers under construction:	
a. Elementary school centers	57
b. Secondary school centers	27
c. Combined elementary-secondary school centers	10
Total	94
3. Number of school centers in Iowa to be abandoned and discontinued as any type school center by the beginning of the 1959-60 school year:	
a. Elementary school centers	41
b. Secondary school centers	6
c. Combined elementary-secondary centers	22
Total	69
4. Net change (plus or minus) in the number of school centers due to conversion from one type of school center to another type of school center:	
a. Elementary school centers	-6
b. Secondary school centers	+2
c. Combined elementary-secondary school centers	-11
Total	-15
5. Net number of school centers that would be available in Iowa by the beginning of the 1959-60 school year:	
a. Elementary school centers	502
b. Secondary school centers	193
c. Combined elementary-secondary school centers	699
Total	1,394

TABLE X.

LOCAL SCHOOL ADMINISTRATIVE UNITS NEEDED BY SEPTEMBER 1959

1. Number of existing local school administrative units in Iowa:	
a. Operating elementary schools only	2,051
b. Operating secondary schools only	0
c. Operating both elementary and secondary schools	836
d. Not operating schools	1,671
Total	4,558
2. Number of local school administrative units by the beginning of the 1959-60 school year:	
a. Operating elementary schools only	1,800
b. Operating secondary schools only	0
c. Operating both elementary and secondary schools	800
Total	2,600

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TABLE XI.

SCHOOL BUSES NEEDED BY SEPTEMBER 1959

1. Number of additional school buses required, over and above normal replacement of existing buses	400
2. Estimated cost of these additional buses (1951 prices)	\$1,600,000.

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TABLE XII.

CONSTRUCTION NEEDED BY SEPTEMBER 1, 1959

During the period between July 1, 1952, and June 30, 1954, because of an increase in population, a shift in population, reorganization and consolidation of school districts and the closing of many rural schools and some small high schools, the need for classrooms increased.

The Second Phase of the Survey just completed shows that by September 1959 the following facilities should be provided:

"A" PROJECTS

(These are projects where a firm decision has been made as to need, type, size and location.)

	Cost
48 Complete new plants	\$22,394,266.
33 New buildings on sites already owned by district	6,355,500.
84 Additions to present buildings	12,160,578.
36 Remodeling projects	1,841,230.
22 New sites, site additions and improvement	271,000.
Total	\$43,022,574.

TABLE XII—Continued

Classrooms provided	1,299
Pupils accommodated	36,935
Sq. ft. in building area.....	2,963,027

"B" PROJECTS

(These are projects where a tentative decision has been made as to need, type, size and location.)

	<i>Cost</i>
34 Complete new plants	\$17,220,000.
33 New buildings on sites already owned by district	5,013,000.
73 Additions to present buildings	9,075,500.
32 Remodeling projects	905,500.
25 New sites, site additions and improvement	290,000.
Total	\$32,504,000.
Classrooms provided	1,024
Pupils accommodated	28,705
Sq. ft. in building area	2,314,070

"C" PROJECTS

(These are projects where only a residual need for an estimated number of pupils has been projected.)

	<i>Cost</i>
34 Complete new plants	\$23,089,000.

22 New buildings on sites already owned by district	3,305,000.
94 Additions to present buildings	8,738,480.
28 Remodeling projects	370,000.
8 New sites, site additions and improvement	84,500.

Total **\$35,586,980.**

Classrooms provided	1,245
Pupils accommodated	36,460
Sq. ft. in building area	2,314,070

GRAND TOTALS:

Classrooms provided	3,568
Pupils accommodated	102,100
Square feet in area	7,600,637
Cost—Complete new plants	\$ 62,703,266.
Cost—New buildings on new sites	\$ 14,673,500.
Cost—Additions to buildings	\$ 29,974,558.
Cost—Remodeling projects	\$ 3,116,730.
Cost—New sites, site additions and improvements	\$ 645,500.

Total Cost **\$111,113,554.**

Needed by rural elementary schools:

52 classrooms for 1,590 pupils for 90,640 square feet at a cost of \$1,264,400.

TABLE XIII.

CONSTRUCTION NEEDS BY COUNTIES

Out of Iowa's 99 counties, 28 of them listed needs costing over one million dollars each. These counties were:

Polk	\$ 18,554,112.	Black Hawk	\$ 1,624,000.
Linn	9,283,730.	Jasper	1,395,000.
Scott	5,353,738.	Emmet	1,275,000.
Pottawattamie	3,880,000.	Tama	1,213,000.
Clinton	3,800,000.	Hancock	1,170,000.
Woodbury	2,867,480.	Mahaska	1,150,000.
Story	2,128,000.	Warren	1,150,000.
Cerro Gordo	2,103,700.	Marion	1,153,000.
Kossuth	2,021,500.	Clayton	1,141,000.
Webster	1,964,000.	Greene	1,110,000.
Des Moines	1,889,000.	Hardin	1,103,000.
Lee	1,743,000.	O'Brien	1,062,230.
Calhoun	1,695,000.	Keokuk	1,010,000.
Boone	1,659,600.	Sioux	1,000,000.

The following 36 counties listed needs costing between \$500,000 and \$1,000,000:

Allamakee	Floyd	Johnson	Osceola
Benton	Franklin	Jones	Page
Buchanan	Hamilton	Lyon	Pocahontas
Cedar	Harrison	Marion	Poweshiek
Cherokee	Henry	Mills	Sac
Clay	Humboldt	Mitchell	Union
Crawford	Ida	Monona	Winnebago
Dallas	Iowa	Montgomery	Winneshiek
Fayette	Jefferson	Muscatine	Wright

31 counties listed needs costing between \$151,000 and \$499,999.

Four counties listed no needs—Chickasaw, Davis, Lucas, and Ringgold.

TABLE XIV.

KINDS OF FACILITIES NEEDED BY SEPTEMBER 1959
AS LISTED BY SCHOOL DISTRICTS

Among the facilities listed that were needed or planned by September 1959 were:

- 61 Auditorium-Gymnasiums
 - 3 Auditoriums
 - 4 Gymnasiums
- 55 Vocational shops and/or vocational ag. classrooms
- 31 Industrial arts shops
- 18 Homemaking rooms
- 36 Lunch rooms
- 51 Instrumental and vocal rooms
- 15 Multi-purpose rooms
 - 2 Art rooms
 - 2 Libraries
 - 1 Library study hall
 - 2 Community rooms
 - 1 Stadium
- 16 Bus barns

Not included in the above list were several new high school and junior high plants, which would of course, increase certain facilities if counted. Many schools included kindergartens needed and being planned.

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TABLE XV.

A. ESTIMATED RESOURCES TO MEET CONSTRUCTION NEEDS BY SEPTEMBER 1959:

(95 counties out of 99 in Iowa reported needs)

Number of local administrative units unable to finance construction needs.....	197
Total cost of construction needs of these districts	\$ 82,265,179.
Estimated cost of additional buses needed over and above replacement of existing buses	400,000.
Total Capital Outlay.....	82,665,179.
Total capital outlay resources available by September 1959.....	42,154,376.
Total Deficit	\$ 40,510,802.

B. FOR THE WHOLE STATE OF IOWA AS A UNIT:

Total estimated cost of construction needs by September 1959.....	\$112,379,954.
Total estimated cost of buses needed over and above replacement of existing buses	1,600,000.
Total Capital Outlay.....	\$113,979,954.
Total estimated capital outlay resources available by September 1959.....	\$300,000,000.

If the school districts of Iowa were reorganized into more efficient administrative districts and attendance centers most of them could afford an adequate educational program with a sound financial base per pupil for construction needs and for operating and maintaining the schools. However, there would be a few districts that would be hampered by sparsity of population, poor resources, and transportation problems.

It is difficult to identify all of these localities without further research.



—Cut courtesy Des Moines Tribune

"... Ain't What She Used to Be Many Long Years Ago."

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